# FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST- 8074

## Open Skies Resort

### SUMMARY

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|---|---|
| Applicant: | Pondoray Shores Water and Sewer District |
| Facility Name and Address: | Pondoray Shores Water and Sewer District (POTW)<br>339 Open Skies Road<br>Newport, WA 99156 |
| Type of Treatment: | POTW; Single-cell, earthen -lined lagoon system. |
| Lagoon Location: | On the south side of the entrance road coming into the development, approximately 400 feet from the asphalt.<br><br>NW¼ of the NE¼, Section 27, T32N, R44E.W.M.<br><br>Latitude: 48° 15’ 15" N<br>Longtitude: 117° 13’ 33.5" W |

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## INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. **ST-8074** . The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the State include procedures for issuing permits (Chapter 173-216 WAC), technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC) and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish the basis for effluent limitations and other requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments

| **GENERAL INFORMATION** | |
|---|---|
| Applicant | Pondoray Shores Water and Sewer District |
| Facility Name and Address | Pondoray Shores Water and Sewer District Sewer System;<br>Pondoray Shores Road; Newport, WA 99156 |
| Type of Treatment System: | POTW; Single-cell, earthen -lined lagoon system. |
| Discharge Location | Latitude: 48° 15’ 15"N Longitude: 117° 13' 33.5"W. |
| Legal Description of Application Area | NW¼ of the NE¼, Section 27, T32N, R44E.W.M.<br>Latitude: 48° 15’ 15"N.<br>Longitude: 117° 13' 33.5"W. |
| Contact at Facility | Name: Eric J. Eldenburg, Project Engineer<br>Telephone #: (509) 447-2112 |
| Responsible Official | Name: Eugene M. Nelson<br>Title: Secretary<br>Address: 339 Open Skies Road; Newport, WA 99156<br>Telephone #: (509) 447-2031<br>FAX # |

## BACKGROUND INFORMATION

### *DESCRIPTION OF THE COLLECTION AND TREATMENT SYSTEM*

Pondoray Shores, formerly known as Open Sky Resorts, is a small vacation home development on the east shore of the Pend Orielle River, across the river from Dalkena. The site is approximately 40 miles north of Spokane and 18 miles northwest of Newport. The development was originally platted in 1970 and has approximately 50 platted home sites and 40 camp sites that can discharge to the existing sewer system.

The well that supplies water to the development is located in the SW¼ of the NE¼, Section 27, T32N, R44E.W.M., just south of the lagoon. It appears that the well is down about 100 feet, and the water level is about 25 feet below ground surface. Since the direction of groundwater is unknown, the potential impact of a porous lagoon on the drinking water supply is not known. However, the bacteriological analyses for the well, the latest of which was done in November, 1999 indicates the drinking water is satisfactory for drinking.

#### HISTORY

The resort was developed in 1970 by R.O.W. Corporation, a Hawaii Corporation. The principals in the firm were Richard Oberdorfer and his wife Winifred. Pend Orielle County had an agreement to take over the ownership, operation and maintenance of the system should "the treatment system efficiency or system operation is unsatisfactory, either as a result of plant capacity or physical operation, and/or the county is required or desires to implement their comprehensive sewage plan."

In 2000, Mr. Oberdorfer sent a letter to the county that he did not own the system and that ROW Corporation ceased to exist in 1998. The county became defacto, albeit reluctant, owners of the system in that year, while continuing to work at convincing the homeowners to form a water and sewer district. In 2002, the homeowners convinced that it would be better both economically and administratively to form that district, formally took over operation of the system. The plan currently in effect, with financing in place, will result in an on-site treatment system installed in 2004, and abandonment of the lagoon.

#### COLLECTION SYSTEM STATUS

We have no record of the sewage collection system which was initially installed in 1970 or 1971. However, we have been told that the inspection process for hooking-up new connections has been lax. It was conveyed to us that code regulations have not always been followed, and there may be opportunity for extraneous flows to enter the system because of this. There is evidently, one duplex sewage pump station in the collection system.

Since the district has been formed, the system has been managed much better. It is our understanding that the pump station was recently updated and will become part of the final on-site system.

TREATMENT PROCESSES

We have no records of the wastewater treatment system approved for this development, or the design limitations imposed. We have a copy of a transmittal letter from the engineer on the project to the Washington State Pollution Control Commission, this agency's predecessor organization, which accompanied a set of plans for the treatment system. That letter indicates that the planned system included an extended aeration package plant, followed by a non-overflow lagoon system.

Ecology personnel inspected the site in 1998 and only a small earthen lined lagoon system is operational. Either the extended aeration plant was never installed or has been removed. The site of the lagoon is unfenced and is overgrown with vegetation. It appears that no maintenance is occuring.

The treatment lagoon will be abandoned in 2004. We will request that the district supply this office with information on the final disposition of the lagoon site. We have no specific requirements for abandonment.

DISTRIBUTION SYSTEM ( INFILTRATION BASIN)

The lagoon appeared to contain very little water. It is likely that the lagoon excessive leaks wastewater and affords minimal or no treatment. The only treatment for the raw wastewater would appear to be in the wetwell of the lift station. The lagoon appears to have received only domestic wastewater from its inception. The responsibility for the lagoon site and proper abandonment will be that of the ultimate owner of the property. It is currently unknown whether Mr. Oberdorfer will be transmitting the lagoon site to the Water and Sewer District, or whether he will retain ownership.

RESIDUAL SOLIDS

It is doubtful that any sludge was ever removed from the lagoons. It is unknown as to the disposition of any rags and debris removed from the sewer system or the pump station. In the abandonment of the lagoons, any solids removed from lagoon will be land applied under a permit from the Northeast Tri-County Health Department.

*GROUND WATER*

Groundwater conditions are unknown, however, the site is within 200 feet of the river. It is our understanding that the new drainfields will be located near the existing lagoon. Should there be no action taken to abandon the lagoons in 2004, we will request a groundwater analysis be conducted.

*PERMIT STATUS*

The previous permit for this facility was issued on June 12, 2000.

An application for permit renewal was submitted to the Department on October 15, 2003 and accepted by the Department on October 17, 2003.

*SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT*

The facility last received an inspection in October, 2003.

During the history of the previous permit, the Permittee has not submitted Discharge Monitoring Reports (DMRs) or complied with any conditions of its permit.

*WASTEWATER CHARACTERIZATION*

No information has been supplied on the quality of the influent or the lagoon contents. This permit will require testing during the short remaining life of the lagoon for these locations.

*SEPA COMPLIANCE*

SEPA will be required for any upgrade of the sewage system. The review and approval authority for the drainfield system will be the State Department of Health.

## PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the State. The minimum requirements to demonstrate compliance with the AKART standard are derived from the *Water Reclamation and Reuse Standards*, the *Design Criteria for Municipal Wastewater Land Treatment*, and Chapter 173-221 WAC.

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

*TECHNOLOGY-BASED EFFLUENT LIMITATIONS*

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110).

*GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS*

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Ground Water Quality Standards. Drinking water is the beneficial use generally requiring the highest quality of ground water. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

Applicable ground water criteria as defined in Chapter 173-200 WAC and in RCW 90.48.520 for this discharge include the following:

**Table 1: Ground Water Quality Criteria**

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|---|---|
| Total Coliform Bacteria | 1 Colony/ 100 mL |
| Total Dissolved Solids | 500 mg/L |
| Chloride | 250 mg/L |
| Sulfate | 250 mg/L |
| Nitrate | 10 mg/L |
| pH | 6.5 to 8.5 standard units |
| Manganese | 0.05 mg/L |
| Total Iron | 0.3 mg/L |
| Toxics | No toxics in toxic amounts |

The Department has reviewed existing records and is unable to determine if background ground water quality is either higher or lower than the criteria given in Chapter 173-200 WAC; therefore, the Department will use the criteria expressed in the regulation in the proposed permit. The discharges authorized by this proposed permit are not expected to interfere with beneficial uses.

*COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED JUNE 12, 2000.*

**Table 2: Comparison of Previous and New Limits**

| Parameter | Existing Limits | Proposed Limits |
|---|---|---|
| Maximum Daily Flow | 5000 gpd | 13,000 gpd |

## MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

*INFLUENT AND EFFLUENT MONITORING*

The monitoring and testing schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

## OTHER PERMIT CONDITIONS

*REPORTING AND RECORDKEEPING*

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

*FACILITY LOADING*

The design criteria for this treatment facility are taken from Permit Application prepared by James A. Sewell and Associates and are as follows:

| | |
|---|---|
| Monthly average flow (max. month): | 13,000 gpd |
| BOD influent loading: | 23.8 lbs/day |
| TSS influent loading: | 23.8 lbs/day |

*OPERATIONS AND MAINTENANCE*

The proposed permit contains condition S.5. as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

*RESIDUAL SOLIDS HANDLING*

To prevent water pollution the Permittee is required in permit condition S6. to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and State Water Quality Standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503 and by Ecology under Chapter 70.95J RCW and Chapter 173-208 WAC. The disposal of other solid waste is under the jurisdiction of the local health district.

Requirements for monitoring sewage sludge and recordkeeping are included in this permit. This information will by used by Ecology to develop or update local limits and is also required under 40 CFR 503.

*GROUND WATER QUALITY EVALUATION (HYDROGEOLOGIC STUDY)*

In accordance with WAC 173-200-080, if the proposed drainfield is not constructed in 2004, the permit requires the Permittee to prepare and submit a hydrogeologic study for Departmental approval. The hydrogeologic study will be based on soil and hydrogeologic characteristics and be capable of assessing impacts on ground water. The study will be prepared using *"Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems,"* Ecology 1993. The hydrogeologic study will be part of an engineering report submittal evaluating the current waste treatment plant and requirements for its upgrade.

*GENERAL CONDITIONS*

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the

treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to submit written notice of significant increases in the amount or nature of discharges (typically new industrial discharges) into the sewer system tributary to the permitted facility. Condition G6 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G7 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Condition G8 requires application for permit renewal 60 days prior to the expiration of the permit. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

## RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for five years.

## REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No.3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology and Department of Health, 1997. Water Reclamation and Reuse Standards, Ecology Publication # 97-23. 73 pp.

Washington State Department of Ecology.

Laws and Regulations( http://www.ecy.wa.gov/laws-rules/index.html )

Permit and Wastewater Related Information (http://www.ecy.wa.gov/programs/wq/wastewater/index.html )

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November, 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

## APPENDICES

*APPENDIX A--PUBLIC INVOLVEMENT INFORMATION*

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on July 3 and July 10, 2002 in the Newport Miner to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on March 17, 2004 in the Newport Miner to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, Washington 99205-1295

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 329-3400, or by writing to the address listed above.

This permit is being managed by Cynthia Wall.

*APPENDIX B--GLOSSARY*

**Ambient Water Quality**--The existing environmental condition of the water in a receiving water body.

**Ammonia**--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Average Monthly Discharge Limitation**--The average of the measured values obtained over a calendar month's time.

**Best Management Practices (BMPs)**--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**$BOD_5$**--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The $BOD_5$ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass**--The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Chlorine**--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

**Compliance Inspection - Without Sampling**--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling**--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

**Composite Sample**--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity**--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Continuous Monitoring** –Uninterrupted, unless otherwise noted in the permit.

**Distribution Uniformity**--The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

**Engineering Report**--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Fecal Coliform Bacteria**--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

**Grab Sample**--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

**Industrial Wastewater**--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Maximum Daily Discharge Limitation**--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

**Method Detection Level (MDL)--**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**pH**--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Quantitation Level (QL)--** A calculated value five times the MDL (method detection level).

**Soil Scientist**--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy,

crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

**State Waters**--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater**--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria**--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids**--That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)**--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit**--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

*APPENDIX C—SITE MAP*

*APPENDIX D--RESPONSE TO COMMENTS*